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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,951	01/26/2004	David G. Miller	US030082	9296

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EXAMINER

KASZTEJNA, MATTHEW JOHN

ART UNIT PAPER NUMBER

3739

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,951

Applicant(s)

MILLER, DAVID G.

Examiner

Matthew J. Kasztejna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice of Amendment

In response to the amendment filed on December 20, 2005, amended claims 7, 11 and 19 are acknowledged. All current rejections stand. The following reiterated grounds of rejection are set forth:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (U.S. Patent No. 5,827,175) in view of Rabiner et al. (U.S. Patent No. 6,524,251).

In regard to claims 1, 6, 8-10, 14 and 21, Tanaka teaches an endoscope 1 having a distal end and an instrument channel 6 through which an ultrasound probe 11 is inserted (see Figure 8). Ultrasound probe head 11a is provided with an end cap 20 which is formed of a material with appropriate acoustic properties to accommodate an ultrasound transducer 21 (see Figure 8 and col. 4, lines 35-41). Tanaka is silent as to the material makeup of end cap 20. However, Rabinier et al. disclose an ultrasound probe 22 contained within a sheath 121 that can be formed from a material that has acoustical dampening properties capable of dissipating energy such as ceramic material, which is also for the benefit of sterilizability (see col. 13, lines 35-53). Rabinier

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et al. thus demonstrate that covers for ultrasound probes formed from a ceramic material are well known in the art. Furthermore, the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to form the end cap 20 of Tanaka from the ceramic material disclosed by Rabinier et al., since the ceramic material provides the necessary acoustic properties required by Tanaka and is sterilizable. Finally, a ceramic material would inherently be electrically insulating and have a thermal conductance greater than 1 W/M-OK, or approximately 30 W/M-OK (as also noted by applicant at page 4 of the specification).

In regard to claim 2, the endoscope 1 has a manipulating head 2 for controlling movement of the distal end of insertion rod 3 and the ultrasound examination system 10 includes ultrasound probe 11, a probe controller unit 12, and ultrasound image observation terminal 12 with a viewing screen and an ultrasound image monitor 14 (see col. 4, lines 10-35). **In regard to claim 3**, Figure 2 shows that the end cap 20 is in thermal contact with the ultrasound transducer 21. **With further respect to claim 21 and in regard to claims 4, 5, 12 and 13**, it is inherent that the ceramic material disclosed by Rabinier et al. is both non-toxic and non-reactive in the presence of bodily fluids, since the sheath 121 (and end cap 20 of Tanaka) are inserted into the body for procedures. **In regard to claims 7 and 11**, the broad disclosure of ceramic materials at col. 13, lines 50-55 of Rabinier et al. incorporates the use of alumina-based ceramic. **In regard to claims 15-20**, the structure disclosed by Tanaka in view of Rabinier et al. is

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inherently capable of being used to perform a TEE procedure. **With further respect to claim 15**, see the above rejection for claim 1. **With further respect to claims 16 and 17**, see the above rejections for claims 4, 5, 12 and 13. **With further respect to claim 18**, see the above rejection for claim 1. **With further respect to claim 19**, see the above rejection for claims 7 and 11. **With further respect to claim 20**, see the above rejection for claim 1.

Response to Arguments

Applicant's arguments filed December 20, 2005 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Rabinier et al. disclose an ultrasound probe 22 contained within a sheath 121 that can be formed from a material that has acoustical dampening properties capable of dissipating energy such as ceramic material, which is also for the benefit of sterilizability (see col. 13, lines 35-53). Rabinier et al. thus demonstrate that covers for ultrasound probes formed from a ceramic material are well known in the art. Furthermore, the selection of a known material based upon its suitability for the intended use is a design consideration within

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the skill of the art. As broadly as claimed, the combination of Tanaka and Rabiner disclose an endoscope including a distal end; at least one ultrasound transducer contained within the distal end; and a covering fabricated from an electrically insulating material capable of having a thermal conductance greater than 1 W/M-OK overlaying at least a portion of the distal end.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Kasztejna whose telephone number is (571) 272-6086. The examiner can normally be reached on Mon-Fri, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone


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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJK

2/22/06



LINDA C. M. DVORAK
SUPERVISORY PATENT EXAMINER
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